

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: **09/981,002**  
Now issued patent **7,452,665**

Applicant: **Wayne BARNES**

Filed: **October 17, 2001**

Title: **DNA POLYMERASES WITH  
ENHANCED LENGTH OF PRIMER  
EXTENSION**

Docket No.: **60019640-0013**

Examiner: **Christopher M BABIC**

Group Art Unit: **1637**

Confirmation No.: **6531**

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January 13, 2009

**FILED ELECTRONICALLY VIA EFS-WEB**

Commissioner for Patents  
ATTN: Certificate of Correction Branch  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CORRECTION UNDER 37 CFR §1.323**

Sir:

Applicant respectfully requests that the PTO enter into the permanent record a correction of an error in the claims of the above-referenced patent.

Applicant submits that the claims were inadvertently filed out of order, with resulting incorrect dependencies. The form PTO/SB/44 submitted herewith corrects that error.

The corrected claims should read as follows.

1. A kit for the synthesis of a polynucleotide, said kit comprising a mixture comprising:
  - (a) a first DNA polymerase, wherein said first polymerase possesses 3'-5' exonuclease activity selected from the group consisting of Archaeobacterial DNA polymerases, and

(b) a second DNA polymerase, wherein said second polymerase lacks 3'-5' exonuclease activity selected from the group consisting of thermostable DNA polymerases lacking 3'-5' exonuclease activity;

wherein the ratio of DNA polymerase activity of the first DNA polymerase to the DNA polymerase activity of the second DNA polymerase is from about 1:100 up to about 1:600.

2. A kit according to claim 1, wherein said second DNA polymerase comprises *Thermus aquaticus* DNA polymerase.
3. A kit according to claim 2, wherein said *Thermus aquaticus* DNA polymerase is selected from the group consisting of wild-type *Thermus aquaticus* DNA polymerase and N-terminal deleted forms of the same enzyme.
4. A kit according to claim 1, wherein said first DNA polymerase comprises *Pyrococcus furiosus* DNA polymerase.
5. A kit according to claim 2, wherein said *Thermus aquaticus* DNA polymerase comprises KlenTaq-278 DNA polymerase.

An appendix including text of the claims as corrected, with insertions indicated by underscoring and deletions indicated by double bracketing, is provided herewith. Applicant submits herewith a credit card payment via EFS-Web for \$100, in accordance with 37 CFR §1.20(a). The Commissioner is hereby authorized to charge any additional required fees or refund any overpayment with regard to this patent to Deposit Account No. 19-3140.

Respectfully submitted,

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## APPENDIX

What is claimed is:

1. A kit for the synthesis of a polynucleotide, said kit comprising a mixture comprising:

(a) a first DNA polymerase, wherein said first polymerase possesses a 3'-5' exonuclease activity selected from the group consisting of Archaeobacterial DNA polymerases, and

(b) a second DNA polymerase, wherein said second polymerase lacks 3'-5' exonuclease activity selected from the group consisting of thermostable DNA polymerases lacking 3'-5' exonuclease activity;

wherein the ratio of DNA polymerase activity of the first DNA polymerase to the DNA polymerase activity of the second DNA polymerase is from about 1:100 up to about 1:600.

[[4]] 2. A kit according to claim 1, wherein said second DNA polymerase comprises *Thermus aquaticus* DNA polymerase.

[[2]] 3. A kit according to claim [[1]] 2, wherein said *Thermus aquaticus* DNA polymerase is selected from the group consisting of wild-type *Thermus aquaticus* DNA polymerase and N-terminal deleted forms of the same enzyme.

[[3]] 4. A kit according to claim 1, wherein said first DNA polymerase comprises *Pyrococcus furiosus* DNA polymerase.

5. A kit according to claim 2, wherein said *Thermus aquaticus* DNA polymerase comprises KlenTaq-278 DNA polymerase.